

Studies in Australian grasses 8¹. A new species of *Thelepogon* (Andropogoneae: Ischaeminae) for Australia

Bryan K. Simon

Summary

Simon, Bryan K. (1993). Studies in Australian grasses 8. A new species of *Thelepogon* (Andropogoneae: Ischaeminae) for Australia. *Austrobaileya* 4(1):105–108. The first record of the andropogonoid grass genus *Thelepogon* for Australia is reported, with the description of a new species *Thelepogon australiensis*.

Keywords: Andropogoneae: Ischaeminae, *Thelepogon australiensis*.

Bryan K. Simon, Queensland Herbarium, Meiers Road, Indooroopilly, Qld 4068, Australia

Introduction

Amongst a plant collection made in April 1991 by John Clarkson and John Neldner from the Archer River of north Queensland was an interesting andropogonoid grass. It keys out to *Thelepogon* in the latest two keys to world grass genera (Clayton & Renvoize 1986; Watson & Dallwitz 1988), thus establishing a new grass generic record for Australia. It differs from *Thelepogon elegans* Roth in Roem. & Schult., until now the only known species of *Thelepogon*, by a number of characters mentioned in the diagnosis.

Thelepogon Roem. & Schult, Syst. Veg. 2: 46 (1817).

Tufted annuals with erect culms having basal prop roots. Leaves: ligule a hair-fringed membrane; blades narrow, flat, cordate to subcordate at base, with tubercle-based spines or cilia on the margins. Inflorescence terminal on the culm, digitate or subdigitate, with spikelets not embedded in rachis, espatheate; racemes 1–17 with the rachis fracturing at maturity; rachis internodes and pedicels slender or stout, sometimes thickened upwards, glabrous or hairy, from about half to equalling the length of the sessile spikelet. Spikelet pairs reduced to the sessile spikelet and the pedicel of the pedicelled

spikelet. Spikelets bisexual, lanceolate in outline, ± dorsiventrally compressed, the callus truncate, not pungent and without a central peg. Glumes ± equal in length, as long as the spikelet, but very dissimilar; lower glume indurated, narrowly ovate, not distinctly 2-keeled, convex on back, acute, distinctly rugose; upper glume coriaceous, lanceolate, boat-shaped, acuminate, smooth, keeled, glabrous to weakly hairy on margins. Lower floret male, sometimes without a palea; lemma and palea (if developed) slightly shorter than spikelet, glabrous, membranous. Upper floret bisexual: lemma slightly shorter than spikelet, membranous, bilobed to $\frac{2}{3}$ of the lemma, with a geniculate, twisted awn arising from between the lobes; palea shorter than lemma, membranous. Pedicelled spikelets represented only by the compressed, linear pedicel.

Thelepogon australiensis B.K. Simon, sp. nov.

T. eleganti Roth in Roem. & Schult. affinis, sed inflorescentia 1–3 racemis (inflorescentia nunquam uniracemis in *T. elegans*), glumis inferis minus rugosis, sine palea infera, marginibus foliorum ciliis tuberculis (non spinis tuberculis), differt. **Typus:** Queensland. COOK DISTRICT: 62 km N of Archer R. on Coen to Weipa road, 19 April 1991, *Ptilostigma malabaricum* low open woodland with a dense grass dominated ground layer, J.R. Clarkson 8981 & V.J. Neldner (holo: BRI [AQ 570010, 2 sheets]; iso: K, MBA, NSW).

¹ continued from *Austrobaileya* 4(1): 57–66 (1993).

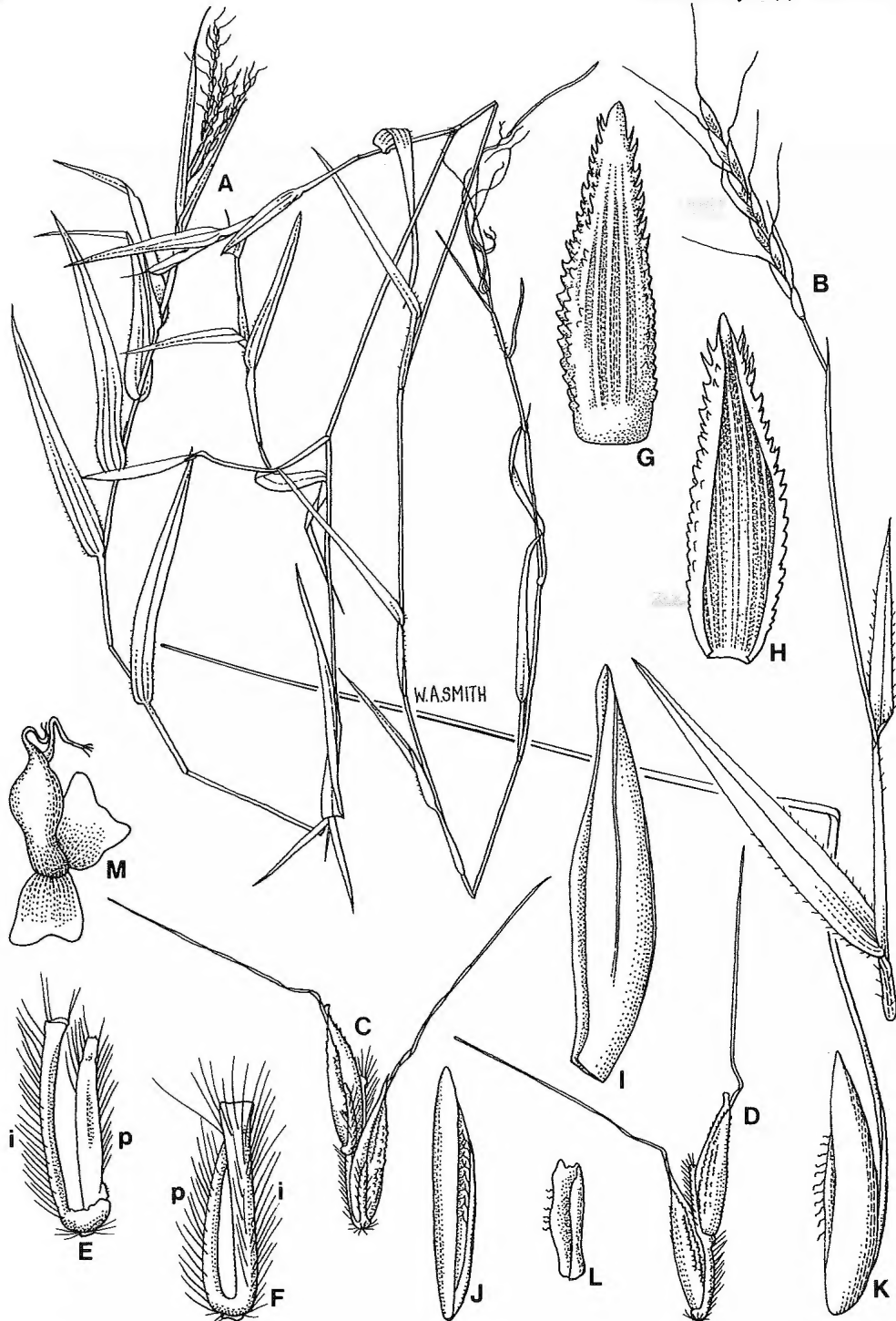


Fig. 1 *Thelepogon australiensis*: A. culm with three racemes $\times 0.33$. B. apex of culm with one raceme $\times 1$. C, D. two raceme segments of sessile spikelets and pedicels $\times 3$, view from both sides of raceme. E, F. raceme internode (i) and pedicel (p) $\times 4$, view from both sides of raceme. G, H. lower glume, back (G) and front (H) views. I. upper glume, side view. J. lower lemma, side view. K. upper lemma, side view. L. upper palea, side view (G–L $\times 8$). M. young ovary and lodicules $\times 16$. All drawn from holotype.

Culms to 140 cm tall, erect, red in colour particularly towards the base, branching from some nodes. Nodes glabrous. Leaves with tubercle-based cilia on the sheaths and blades, the tubercles more pronounced on adaxial surface and margins. Blades 5–12 cm × 6–10 mm, narrowly lanceolate, subcordate at base. Ligule c. 1 mm long. Racemes 1–3, 2.5–5.5 cm long, 10–13-jointed, arranged digitately where there is more than one raceme, with peduncles 8–13 mm long and puberulous. Internodes c. 3.5 mm long, slightly longer than pedicels, villous on outside, linear and compressed. Sessile spikelet 6–7 × c. 1.5 mm, dorsiventrally compressed, elliptic-lanceolate in outline. Lower glume c. 6.5 mm long, 7-nerved, finely rugose, indurate, glabrous; upper glume c. 7 mm long, 3-nerved, glabrous, scabrid on keel towards apex, coriaceous. Lower floret with lemma c. 4 mm long, narrowly elliptic, membranous; palea absent. Upper floret with lemma c. 4 mm long, lanceolate, membranous, with awn to 16 mm long; palea c. 2 mm long, a small hyaline scale; anthers c. 1.2 mm long. Pedicel c. 3 mm long, villous on outside. Caryopsis not seen.

Distribution and habitat: *Thelepogon australiensis* is only represented by the type specimen on the Coen to Weipa road 62 km north of the Archer River crossing. It was collected from a tall dense, grass-dominated ground layer in a *Ptilostigma malabaricum* low open woodland on cracking clay soil. The principal grasses associated with the site were *Sorghum laxiflorum* (55% cover) and *Themeda arguens* (25% cover), with *Rottboellia cochinchinensis* and *Thelepogon australiensis* forming about 5% of the cover near the ground surface (J. Clarkson, pers. comm.).

Conservation status: 1K (Briggs & Leigh 1988).

Etymology: The generic name is from the Greek *thele* (a wart) and *pogon* (beard), alluding to the rugose surface of the lower glume and the awned spikelets. The specific epithet refers to the Australian continent.

Notes: The name *Thelepogon* was proposed for a new genus from the Indian region by Roth in

a manuscript for his account of new species from this area (1821), but prepublished in J.J. Roemer and J.A. Schultes (1817). It is based on material collected by Benjamin Heyne in India (Stafleu & Cowan 1983). A single species, *T. elegans*, was described there. Since the time of its description, *T. elegans* has been collected from throughout tropical Africa to Indonesia (Clayton & Renvoize 1982) generally from disturbed habitats on black, clay soils. According to Lazarides (1980) the Asian distribution of the species is from India, Thailand, and Java and Timor in Indonesia. He suggests the plant is a recent introduction in southeast Asia, where it grows in lowlands only as a ruderal. In contrast *T. australiensis*, probably endemic in Australia, does not appear to be a weed and thus far it is known only from the type locality. It has distinctive red culms, particularly at the base and in this respect resembles some specimens of *T. elegans*. It differs from the latter species by the inflorescence having 1–3 racemes, digitately arranged where there is more than one raceme, as opposed the inflorescence always having at least three digitate racemes, by the lower glumes being less rugose, by the lower palea not being developed and by the leaf margins bearing tuberculate-based cilia as opposed to tuberculate-based spines.

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